

EB52F3 Series

- Temperature Compensated Crystal Oscillator (TCXO)
- HCMOS Output
- 3.3V Supply Voltage
- Stability to 1.5ppm
- External voltage control option available



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range		1.544MHz to 44.736MHz
Operating Temperature Range		See Table 1
Storage Temperature Range		-40°C to 85°C
Supply Voltage (V_{DD})		3.3V _{DC} ±5%
Input Current	1.544MHz to 20.000MHz	10mA Maximum
	20.001MHz to 44.736MHz	20mA Maximum
Frequency Stability	vs. Operating Temperature Range	See Table 1
	vs. Input Voltage (V _{DD} ±5%)	±0.3ppm Maximum
	vs. Load (±2pF)	±0.2ppm Maximum
Aging (at 25°C)		±1ppm / year Maximum
Output Voltage Logic High (V_{OH})		90% of V _{DD} Minimum
Output Voltage Logic Low (V_{OL})		10% of V _{DD} Maximum
Rise Time / Fall Time	20% to 80% of Waveform	10 nSeconds Maximum
Duty Cycle	at 50% of Waveform	50 ±10(%)
Load Drive Capability		15pF HCMOS Load Maximum
Internal Trim (Top of Can)		±3ppm Minimum
Control Voltage (External)		1.65V _{DC} ±1.35V _{DC} , Positive Transfer Characteristic
Frequency Deviation	Referenced to F ₀ at V _C = 1.65V _{DC} ; V _{DD} = 3.3V _{DC}	±7ppm Minimum, ±20ppm Maximum
Input Impedance		10kOhms Typical
Modulation Bandwidth	Measured at -3dB, V _C = 1.65V _{DC}	10kHz Minimum
Typical Phase Noise	at 10Hz Offset	-70dBc/Hz
	at 100Hz Offset	-100dBc/Hz
	at 1kHz Offset	-130dBc/Hz
	at 10kHz Offset	-140dBc/Hz
	at 100kHz Offset	-145dBc/Hz

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EB52F3	14-PIN DIP	3.3V	OS1W	01/04

PART NUMBERING GUIDE

EB52F3 A 15 V - 12.800M

OPERATING TEMP. RANGE
One Letter Code Per Table 1

FREQUENCY STABILITY
Two Digit Code Per Table 1

FREQUENCY

EXTERNAL TRIM
N=None (No Connection on Pin 1)
V=Voltage Control on Pin 1

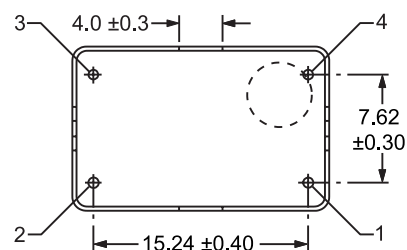
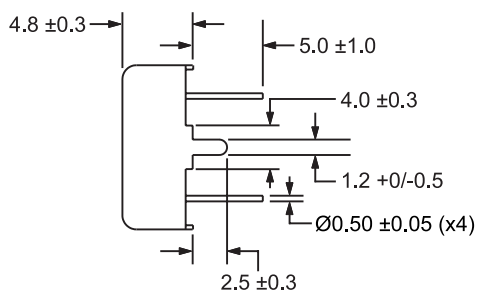
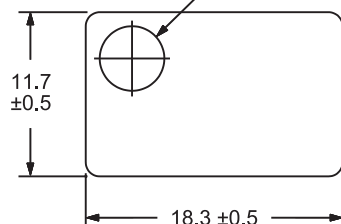
TABLE 1: PART NUMBERING CODES

Operating Temperature Range	Code	Frequency Stability			
		X = Available from 1.544MHz to 32.768MHz Y = Available at any Frequency			
		±1.5ppm	±2.0ppm	±3.0ppm	±5.0ppm
0°C to +50°C	A	Y	Y	Y	Y
0°C to 70°C	B	X	Y	Y	Y
-20°C to +70°C	C	X	Y	Y	Y
-30°C to +75°C	D		X	Y	Y
-40°C to +85°C	E			X	Y

NOTES

MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS

Internal Trim Access Hole $\varnothing 3.5 \pm 0.5$



Pin 1: Voltage Control or No Connect
Pin 2: Case Ground
Pin 3: Output
Pin 4: Supply Voltage

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic

Fine Leak Test
Gross Leak Test
Mechanical Shock
Vibration
Lead Integrity
Solderability
Temperature Cycling
Resistance to Soldering Heat
Resistance to Solvents

Specification

MIL-STD-833, Method 1014, Condition A
MIL-STD-833, Method 1014, Condition C
MIL-STD-202, Method 213, Condition C
MIL-STD-883, Method 2007, Condition A
MIL-STD-883, Method 2004
MIL-STD-883, Method 2002
MIL-STD-883, Method 1010
MIL-STD-883, Method 210
MIL-STD-883, Method 215

MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M
M=MHz
Frequency (5 Digits Maximum + Decimal)

Line 3: XX Y ZZ
Week of Year
Last Digit of Year
Ecliptek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EB52F3	PACKAGE 14 pin DIP	VOLTAGE 3.3V	CLASS OS1W	REV. DATE 01/04
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